# 2014 Consumer Confidence

## Annual Water Quality Report

Water System ID No. 77620Y

For more information or questions please contact:

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Phone: (360) 683-4908 Fax: (360) 681-0552 - Email: waterinfo@sequimwa.gov—Website: http://www.sequimwa.gov

## Dear Water Customer:

The City of Sequim is pleased to share with you, our customers, the quality of your drinking water in this 2014 Annual Water Quality Report.

### We want to be sure you know:

The City of Sequim's drinking water **meets or exceeds** all state and federal safe drinking water standards. You will find full details in this report.

### History of Sequim's Water System

A study of the City of Sequim's water system was completed in 1973. As a result of this study, additional water system improvements were made to the City's water system. These improvements included covering the City reservoir, metering connections, and replacement of sub-standard water lines. Another report was completed in 1983 which addressed issues of water quality, water resources, and conservation. Improvements made to the City's water system which were recommended in this report included covering the 500,000 gallon reservoir, development of the Silberhorn Well Field, installation of a chlorination system in the intake piping, and construction of a new infiltration gallery on the Dungeness River. In 1986, a reservoir at a higher elevation was constructed and the Silberhorn Well Field was brought online. The City's 1.7 million-gallon (MG) reservoir was constructed in 1996. It provides a higher-pressure zone for the City. The Port Williams Well No. 1 was drilled and began providing drinking water in 1995. In 1998, additional pipelines were constructed and Port Williams Well No. 2 was drilled and equipped. A one million gallon reservoir on the east slope of Bell Hill was completed in 2008.

Port Williams Well No. 3 was completed and put into operation in 2009. Number 1 well at our Silberhorn well field was reconditioned and put back online in 2011. In 2013 the city replaced approximately 580 lineal feet of drinking water main lines in South Sequim Avenue and Washington Street. Our water meter replacement program for residential water meters was completed in 2013. In 2014 the City continued planning and engineering for the replacement of water lines that have either reached their service life or have inadequate capacity. These water lines will then be slated for construction in 2015-2016. The city is committed to having a robust water system and will continue to improve your water system with the replacement of undersized public water lines with pipe that meets our current standards to benefit both water flow and quality.

**See Page 8 for the latest information on water testing.**

## Water Quality Protection Programs

The City is committed to supplying its customers with high quality drinking water. The City has adopted a Water System Plan to ensure that the drinking water supplied to its customers meets or exceeds all Federal and State standards.

## The City of Sequim's Water System Plan

This plan was approved by the Sequim City Council, Department of Health (DOH) and Department of Ecology (DOE). The plan analyzes all aspects of the water system, identifying current and future plans by the City to continue to provide high quality drinking water to its customers. The City's Water System Plan must be updated every six years. The City completed the process of a new water system plan in 2014.

## Water Conservation Program

The 2013 Water System Plan recommends many ways in which the City and its residents can help preserve and protect our water resources (see page 4 under Water Conservation).

## Water Storage

Commercial and domestic demand, nesting, and emergency use water storage is provided by four reservoirs. The combined storage capacity of all four reservoirs is 3,400,000 gallons of water.

## Water Quality Monitoring Requirements

Existing State law requires water systems to monitor for numerous contaminants on a regular basis. The City is in compliance with existing water quality monitoring requirements. Pages 8 through 12 indicate the water quality tests regularly performed by the City.

## Wellhead Protection Program

The Water System Comprehensive Plan sets protective boundaries around the City's wells, identifies potential contamination sources around the wells and provides notification to City residents about wellhead protection.

## Cross Connection Program

The city is mandated by Washington State Department of Health (DOH) to have an active cross connection program in place. In 2015 the city will continue to contact customers to achieve our full compliance with DOH cross control requirements. CCC Rules (PDF, DOH 331-355) - Washington State CCC regulations (WAC 246-290-490) and related definitions.

**If you see a potential problem, let us know.**

## Drinking Water Wells

To protect your drinking water wells, follow the Department of Ecology's "Homeowners Guide to Well Construction." You may also refer to the Washington State Administrative Code WAC 173-160-171. Sequim welcomes input and would be happy to supply you with additional information. Feel free to contact the City Public Works staff at 615 N. Sequim Avenue, 360-683-4908 or www.sequimwa.gov.

Upper Dungeness River

Washington's lakes, streams, and rivers play critical roles in people's lives. People rely on clean, unpolluted water for recreation, such as boating, fishing, and swimming. They also rely on clean water for DRINKING. To remain healthy, people need water that is safe to drink (see www.clallam.net for more information on WRIA 18 watershed protection).

## General Health Effects Information

While traveling through the ground, groundwater dissolves some of the naturally occurring minerals that may contain substances resulting from the presence of animals or human activity. Contaminants that may be present include microbes, inorganic and organic chemicals, pesticides, herbicides, and radioactive materials. To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water which are required to meet the same standards as public drinking water.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons with HIV/AIDS or other immune system disorders, some elderly and also infants can particularly be at risk for infections.

Lead and copper can leach into residential water from building plumbing systems. Lead and copper monitoring is conducted at homes categorized as high risk and under worst case conditions. Homes or buildings that were built or re-plumbed with copper pipes and lead-based solder are considered to be high risk. The use of lead-based solder was stopped in 1985. For more information please contact the Washington State Department of Health at 1-800-521-0323.

Checking Chlorine and Pumping Levels

| Water Use Efficiency Leakage Information for 2011 | Million Gallons |
|---|---|
| Total Water Produced | 354 |
| Total Water Purchased | 294 |
| Unaccounted for Distribution System Water | 48 |
| Distribution System Losses as Percentage | 13.7% |

The table above shows the City's water production, purchased water and water system loss. This table also shows the city's commitment to conserve and to account for all water produced and eliminate all unaccounted for water.

Reading Water Meters with Touch Read Wand

## About the Drought

The Dungeness watershed was one of the first designated in the Governor's drought declarations of 2015.

We are experiencing a "snowpack drought," meaning that while total precipitation is near normal, the cumulative snowpack in our local mountains is less than 5% of normal.

With diminished snowpack, there is a diminished or shortened season of snowmelt in the Dungeness River, which in turn means:

- Less recharge to drinking water aquifers we all use.
- Less irrigation water available for farmers to make a living.
- Less streamflow for migrating salmon and wildlife.

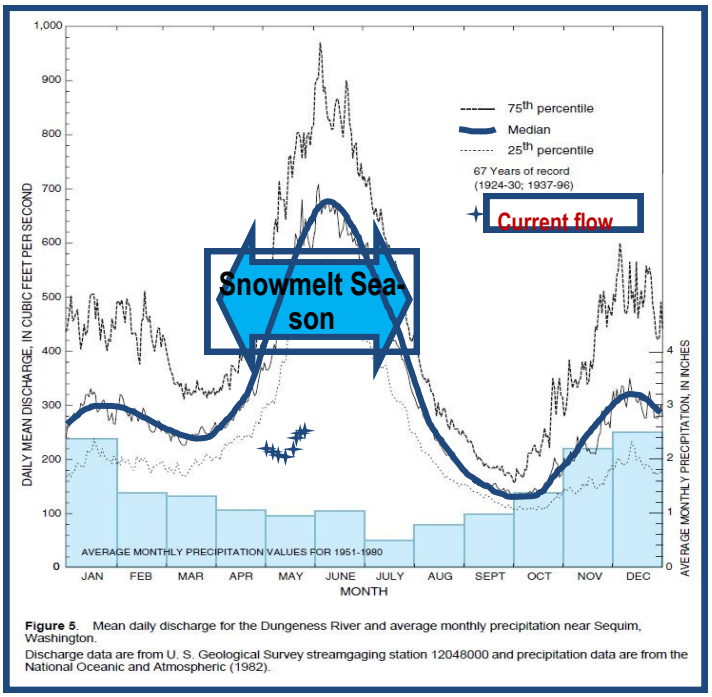


**Figure 5.** Mean daily discharge for the Dungeness River and average monthly precipitation near Sequim, Washington.
Discharge data are from U. S. Geological Survey streamgaging station 12048000 and precipitation data are from the National Oceanic and Atmospheric (1982).

All water purveyors in declared drought regions are affected—some more, some less. City of Sequim's current activities related to water conservation:

Conservation pricing: rate goes up after first 600 cubic feet per month, and another hike after 1600 (600 cubic feet/month is about 150 gallons per day or gpd.)

- New construction requires low-flow fixtures (per State energy code.)
- Water Reclamation Facility produces up to 600,000 gpd reclaimed water for non-potable uses -we are seeking new uses such as irrigation for commercial farms and/or creek or aquifer replenishment.
- Storm & Surface Water Master Plan focused on aquifer recharge & conserving water resources ecosystem-wide.
- Coordination with regional partners in particular on water storage projects for irrigation or stormwater, depending on the season.

Hurricane Ridge March 2015 with a less than 5% normal snowpack.

Additional Resources:
http://ext100.wsu.edu/clallam/
http://www.clallamcd.org/
http://www.clallam.net/waterconservation/

## Water Conservation for You

### Save Water Indoors

The average family uses 22% of their water washing clothes, 1% washing dishes, 16% using faucets, 17% showering, 27% flushing toilets, 14% on leaks, 2% taking baths, and 2% on other uses.

### Save Water in the Bathroom

**Check all faucets, pipes, and toilets periodically for leaks.** A faucet drip or invisible leak in the toilet will add up to 15 gallons of water per day, or 105 gallons per week, which adds up to 5,475 gallons of wasted water per year. Check your flapper periodically to make sure it's a tight fit.

**Install water saving shower heads.** Low-flow showerheads deliver 2.5 gallons of water per minute or less and are relatively inexpensive. Older showerheads use 5 to 7 gallons per minute.

**Take short showers or shallow baths.** Simply taking shorter showers will save gallons of water. For long exposures to the water, a partially filled bath instead of a shower will use less water.

**Install a 1.6 gallon low-flow toilet.** Ultra-low flow toilets use only 1.6 gallons of water per flush. Using these could cut indoor water use by as much as 20%. Older toilets use 3.5 to 5 gallons per flush.

**Check for toilet leaks.** Once a year, check for toilet leaks. Remove the toilet tank cover and drip 10 drops of food coloring into the tank. After 15 minutes, check for color in the toilet bowl. If you see any color, your toilet has a leak and should be repaired immediately. Again, remember to check your flapper periodically to make sure it's a tight fit.

**Don't use the toilet as a wastebasket.** Using a wastebasket instead of the toilet for tissues, cleaning wipes, cloth and other bits of trash will save gallons of water that otherwise are wasted. It will also save the City staff time in finding system plug-ups, doing repairs and reduces City wastewater treatment costs. This saves you, the taxpayer, money.

**Fix leaky faucets immediately**. A leaky faucet may simply need a new washer. Small faucet leaks can waste 20 gallons of water per day. Large leaks can waste hundreds of gallons.

**Turn off the water while shaving, brushing teeth, etc.** Don't let water run when you brush your teeth, wash your face or hand, or shave. This can save 3 to 7 gallons per minute.

| Water Loss in Gallons at 60 psi | |
|---|---|
| Leak this Size | Loss per Month |
| 1/32" | 6000 |
| 1/16" | 25,000 |
| 1/8" | 100,000 |
| 1/4" | 400,000 |

### Save Water in the Kitchen and Laundry

**Fill your dishwasher.** Your dishwasher uses the same amount of water whether it is full or just partially full of dishes, so be sure to fill it before you run it. Many dishwashers have a water saver cycle to save even more water.

**Select proper water level laundry.** Unlike your dishwasher, you can control the amount of water used by your clothes washers. Select the proper water level for each load of laundry.

City Staff Installs a New Water Meter

## Water Saving Tips in the Garden


Since summertime outdoor watering is the biggest use of water (by far), we encourage City residents to reconsider your lawn…

Consider allowing your lawn to go dormant in the summer.

If you do choose to let your lawn go dormant, don't start watering it mid-summer and then stop again. This will damage grass plants.

If you need to water your lawn, do it in the early morning.

- 1" of water once/week is recommended for most of Western Washington.
- Measure the depth of watering with a shallow pan placed under sprinklers.

### Also in the Garden

Water early in the mornings to reduce evaporation losses. An occasional, ample watering is more effective than numerous, superficial waterings.

Use trickle or drip irrigation systems for watering trees, shrubs, hilly areas, or widely spaces plants.

Collect runoff from roofs and paved areas for garden use.

Use surface mulch around trees, shrubs, flowers and garden crops to reduce evaporation loss.

### More Water Saving Ideas

• Wash dishes by hand in a sink or a dishpan—uses less water than a dishwasher.

• Rinse or wash fruits and vegetables in standing, not running, sink water.

• Use the garbage disposal as efficiently as possible.

• Thaw frozen foods in the refrigerator.

• Loosen ice cubes by removing the trays a few minutes before they are needed.

• Keep a covered container for cool drinking water in the refrigerator.

• Repair faucets and toilets promptly.

• Clean sidewalk, driveway, and patio with a broom rather than by hosing off.

• Use a bucket for soapy wash water and rinse quickly with a hose when washing house windows or a car.

• Save bath, shower, and laundry water for toilet flushing if water is in extremely short supply.

• Avoid letting children play with running water.

• Super savers can also install low-flow toilets, dishwasher and clothes washer.

Source: http://www.clallam.net/waterconservation/

## Questions:

**How can I stay in touch with decisions that affect my drinking water?**

- Newspapers
- Attend City Council Meetings
- City of Sequim website: http://www.sequimwa.gov
- DOH website: http://www.doh.wa.gov/ehp/dw/default.htm
- DOE website: http://www.edy.wa.gov/programs/wr/wrhome.html

**Is bottled water cleaner and safer than tap water?**

Since the Federal Food and Drug Administration regulates contaminants in bottled water and is responsible for providing the same levels of public health protection as public water systems, bottled water is not necessarily cleaner or safer than tap water.

Changing Weekly Water Flow Charts

**Why is chlorine added to my drinking water?**

Pursuant to state and federal laws, very small amounts of liquid chlorine in the form of Sodium Hypochlorite (NaOCl) are added to your drinking water as a disinfecting agent to protect you from disease-causing microorganisms. If you are bothered by the chlorine taste, keep a pitcher of tap water in the refrigerator. The chlorine will dissipate rapidly if the water is allowed to sit for a time.

## Protecting our Water Supplies

People have grown understandably concerned about the safety of America's drinking water supply. It is a concern we all share and the City of Sequim has been working hard with our Emergency Management partners, EPA, DOE, DOH, County Health, Dungeness River Watershed, Users, Homeland Security and others in the drinking water industry to provide you with a safe and reliable water system.

## Is our Drinking Water Supply Safe? YES

**Your City Staff monitors:**

- Daily Chlorine Checks
- Daily Turbidity (clarity of water)
- Monthly Coliforms
- Taste and Odor
- Security Surveillance at All Water Supply and Supply Areas
- Backflow Device Testing
- Inspection of All Installations and Repairs

**City customers would be immediately notified if precautions were needed or warranted.**

**What should I do if I see someone around the City's drinking water supply that looks suspicious?**
Contact your local law enforcement by dialing 9-1-1 to report a suspicious event.

Monitoring Levels in Local Wells

## The Following Tests are From July 2014

### Table 2

### Water Quality Data (Regulated by EPA, State and other)

**Source – (SO1) Infiltration System**

| DOH # | Analytes | Results | Units | SRL | Trigger | MCL | Method (Analyst Init.) |
|---|---|---|---|---|---|---|---|
| 20 | Nitrate-N | <(0.1) | mg/L | 0.5 | 5 | 10 | EPA 300.0 (KW) |

### Table 2

### Water Quality Data (Regulated by EPA, State and other)

**Source – Silberhorn (SO2)**

| DOH # | Analytes | Results | Units | SRL | Trigger | MCL | Method (Analyst Init.) |
|---|---|---|---|---|---|---|---|
| 20 | Nitrate-N | 2.17 | mg/L | 0.5 | 5 | 10 | EPA 300.0 (KW) |

### Table 2

### Water Quality Data (Regulated by EPA, State and other)

**Source – Port Williams (SO5)**

| DOH # | Analytes | Results | Units | SRL | Trigger | MCL | Method (Analyst Init.) |
|---|---|---|---|---|---|---|---|
| 20 | Nitrate-N | 0.76 | mg/L | 2.0 | 5 | 10 | EPA 300.0 (KW) |

Definitions of the above tables are located on page 12.

Local Schoolchildren Experience the Dungeness River

Other samples taken in 2014

| Sample | Results | Method EPA | Sample frequency |
|---|---|---|---|
| Average Free Chlorine | 0.30 mg/L | | Daily |
| Coliform Bacteria | Non-Detected | EPA SM 9223 B | Monthly |

Combined Average Hardness of the City's Water System (3 sources)

| Analyte | Results (Combined Average) | Units |
|---|---|---|
| Hardness, Total (as CaCO3) | 108 avg. mg/L | ug/L as CaCO3 |

## The Following Tests are From August 2014

**Table 3**

**Water Quality Data (Regulated by EPA, State and other)**

**Source – Port Williams Pump Station**

**Disinfection By-Product Compound Report**

**EPA Regulated - Under Trihalomethanes Program**

**EPA Method 524.2 For State Drinking Water Compliance**

| DOH # | Compounds | Results | Units | SRL | Trigger | MCL | Method EPA (Analyst Init.) |
|---|---|---|---|---|---|---|---|
| 416 | HAA(5) | 4.6 | ug/L | 1 | 45 | 60 | 524.2 |
| 31 | TOTAL TRIHALOMETHANE | 8.6 | ug/L | | 60 | 80 | 524.2 |

**Table 3**

**Water Quality Data (Regulated by EPA, State and other)**

**Source – 2 inch Blow-Off Ridge Field Road**

**Disinfection By-Product Compound Report**

**EPA Regulated - Under Trihalomethanes Program**

**EPA Method 552.3 For State Drinking Water Compliance**

| DOH # | Compounds | Results | Units | SRL | Trigger | MCL | Method EPA (Analyst Init.) |
|---|---|---|---|---|---|---|---|
| 416 | HAA(5) | ND | ug/L | 1 | 45 | 60 | 524.2 |
| 31 | TOTAL TRIHALOMETHANE | 20.7 | ug/L | | 60 | 80 | 524.2 |

## Reading the Tables

**MCL (Maximum contaminant level):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**MCLG (Maximum contaminant level goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**MFL (Million fibers per liter):** Unit of measure for asbestos fibers greater than 10 mm in length.

**NTU (Nephelometric turbidity unit):** The unit of measure for turbidity.

**PPM (Part per million):** One part per million or one milligram per liter (mg/L).

**Secondary MCLs:** MCLs based on factors other than health effects such as taste and aesthetics.

**DBPs-TTHMs (Total Trihalomethanes):** Contaminants created from the reaction of chlorine and water. The result shown is samples from 2008.

**DOH (Department of Health):** Washington State Department of Health.

**VOC: Volatile Organic Chemicals**

**SOC: Synthetic Organic Chemicals**

**Radioactive Contaminates: Can occur naturally or be the result of oil and gas production and mining activates.**

**SRL: (State Reporting Level)** indicates the minimum reporting level required by DOH.

**NA: (Not Analyzed)** use in the results column for compounds not included in current analysis

**ND: (Not Detected)** use in the results column for compounds analyzed and not detected at a level greater or equal to the SRL.

**Trigger Level: (DOH Drinking Water response level)** Systems with compounds detected at concentrations in excess of this level are required to take additional samples.

**Method: Is a definitive procedure that produces a test result.**

**Results: Is the product of performed test.**

**Units: Are measurements an metric form:** L = Liter, mg = milligram

**Water Quality Monitoring Results**

The data shown in Table 2 are some of the items tested for by the City of Sequim. All the contaminants are well below the levels allowed by the state and federal agencies. Additional information on chemical analyses can be obtained by calling Sequim Public Works Department at 360-683-4908

| Water Quality Monitoring Requirements | | | | |
|---|---|---|---|---|
| **Parameter** | **Sample Location** | **Frequency** | **SOURCE** | **Year** |
| Routine Coliform | Distribution System | 10 per Month | Distribution System | 10 per Month |
| Turbidity | Source Supply | Every Day | SO1, SO2, SO5 | Every Day |
| Inorganics | Source Supply | Every 3 years | SO1, SO2, SO5 | Between 2011 - 2019 |
| VOCs | Source Supply | Every 3 years | SO2, SO5 | 2013 |
| SOCs | Source Supply | Every 3 years | SO1, SO2, SO5 | 2016 |
| Lead and Copper | Distribution System | Every 3 years | Distribution System | 2016 |
| Trihalomethanes | Distribution System | Every Year | Distribution System | 2014 |
| Radium 228 | Source Supply | Every 6 Years | S01, SO2, SO5 | 2015, 2016 |
| Gross Alpha | Source Supply | Every 6 Years | SO5 | 2015 |
| Chlorine Testing | Distribution System | Every Day | Distribution System | Every Day |

**Current Events:**

The City of Sequim completed the Water System Plan (WSP) in 2014. The WSP update is required by the Washington State Department of Health (Office of Drinking Water) every 6 years. The WSP includes many chapters, for example: Cross connection program, water system planning, operations, sampling, sources and water use efficiency. In 2015 the City will be engineering water mains on North and South Sunnyside, West Fir, a portion North 4th and expansion of a booster station.

**Thank you for allowing your City Staff to serve you and share this report with you.**